

XV.—*A Systematic List of the Birds of Sierra Leone.*

By DAVID BANNERMAN, M.B.E., B.A., M.B.O.U.

THERE appears to be very little literature dealing with Sierra Leone Ornithology, and only three papers which deal exclusively with Sierra Leone birds. The following is a short list of the papers I have consulted :—

- L. Fraser. 1839. Proc. Zool. Soc. p. 34. [On a new species of *Corythair.*]
- L. Fraser. 1842. Proc. Zool. Soc. p. 190. }
 L. Fraser. 1843. Ann. & Mag. Nat. Hist. vol. xii. p. 367. }
 [Description of a new *Pitta* (*P. pulik*).]
- Sundevall. 1849. Öfversigt K. Sv. Vet.-Akad. Förhandlingar, pp. 156–163.
 [This list contained the description of a new Hornbill, *Buceros cultratus* (= *Ceratogymna elata*), and the names of 23 birds (17 of which appear to be genuine, while 6 are indeterminable), including *Caprimulgus macrodipterus* Afzel., which has been used by most authors for the Long-plumed Nightjar. The name cannot stand, for the reasons pointed out by Claude Grant (*cf.* Ibis, 1915, p. 302, footnote).]
- Cassin. 1851. Proc. Philad. Acad. p. 347. [Re-described *Chaunonotus subini* under name *C. carbonarius*, and describes *Graucalus azureus*.]
- Jardine. 1852. Contrib. to Ornith. p. 57. [First record of *Halcyon striolata* (= *H. chelicuti*) from Sierra Leone.]
- Sundevall. 1852. Jardine's Contrib. to Ornith. pp. 161, 162. [Makes minor corrections to his description of *Buceros cultratus*.]
- Gray, G. R. 1867. List of specimens in Brit. Mus., pt. v. p. 44. [*Guttera cristata*, recorded from Sierra Leone.]
- Jardine, Sir W. 1874. Catalogue of skins in the Jardine Collection. [Contains names of 42 birds from Sierra Leone collected by Fergusson, a few by Forbes and P. Neil. The skins were sold by auction in London on 17 June, 1886, and a number were then secured for the British, Cambridge University, and Royal Scottish Museums.]

- Kemp, Robin.** 1905. 'Ibis,' pp. 213-247. [With notes by Dr. Bowdler Sharpe.]
- Bannerman, David A.** 1912. 'Ibis,' pp. 219-268. [An account of Mr. Willoughby Lowe's West African collections whilst naturalist on H.M.S. 'Mutine.']
- Kelsall, H. J.** 1914. 'Ibis,' pp. 192-228. [An account of his own collection.]
- Lowe, Willoughby P.** 1921. 'Ibis,' pp. 265-282. [An account of the birds collected on his second trip to Sierra Leone on H.M.S. 'Dwarf,' with notes by myself.]

For the interest of those who have not access to the past numbers of 'The Ibis,' I have prepared a short account of the work done by the three most important collectors, Mr. Robin Kemp, Col. H. J. Kelsall, and Mr. W. P. Lowe :—

Mr. Robin Kemp landed in Sierra Leone on the 7th of March, 1902, and remained there over three years. His collections, which were made in the Mendi country—the south-eastern part of the colony,—comprised 620 skins referable to 145 species. The majority of the birds were shot at Bo (450 ft.), but quite a number at Rotifunk, situated on the Bumpé River, much nearer Freetown and the coast. The Mendi country is described as being "entirely covered with bush or small forest broken here and there by rice-farms and swamps, and has six large rivers flowing in a southerly direction." Kemp's birds are now in the British Museum.

Mr. Willoughby P. Lowe was the next collector to visit Sierra Leone. He stayed there from the 28th of January to the 6th of February, 1911, and again from the 7th to the 12th of March of the same year, when naturalist on board H.M.S. 'Mutine,' at the invitation of Captain Hardy, R.N. During these two short visits Mr. Lowe secured 60 different species of birds. These and the rest of Mr. Lowe's collection, made during the voyage of the 'Mutine,' were worked out by myself, and the results published in 'The

Ibis, 1912, pp. 219-268. I should like to take this opportunity of making some corrections in this paper, two of which have already been pointed out by Major Kelsall. The birds recorded as *Pyrenestes ostrinus* were in reality *P. coccineus* (pp. 224 & 232); likewise the immature birds recorded from Sierra Leone and Liberia as *Chalcomitra acik* are *C. splendidus*, while that from St. Paul de Loanda is *C. gutturalis* (p. 225).

Specimens of *Ardea gularis* were, owing to an unaccountable slip, recorded as *Melanophoyx ardesiaca* (p. 228). These two small Herons cannot possibly be confused. We did not in those days pay such minute attention to the geographical races of birds described, and in consequence several birds recorded as species have now been sunk to the level of subspecies, while others are now recognized as distinct races of the species then recorded. Mr. Lowe's collections were presented to the British Museum by Captain Hardy.

Colonel H. J. Kelsall, R.A. (then Major), was stationed in Sierra Leone from August 1910 to August 1911, and again from February 1912 to February 1913. His collection numbered 941 specimens, embracing 215 species.

Major Kelsall worked out this collection himself, and published a valuable paper, together with an excellent map of the Protectorate. Kelsall carried out most of his observations in the Peninsula, but also toured through the central and southern portions of the Protectorate, an itinerary of which journey will be found in his paper (*l.c.* p. 193). On another occasion he spent a short time in the Ribbi and Bumpe Chiefdoms. His geographical and topographical notes are much fuller than those given by Kemp, and add largely to the value and interest of his paper.

Kelsall's collections were divided between the British, Tring, and Dublin Museums, only 42 specimens belonging to 29 species and subspecies coming to the first named.

Mr. Willoughby Lowe's second collection was made in the spring of last year (1920), mainly on the islands of the Rokelle River, when the guest of Commander Dane, R.N., as naturalist on board H.M.S. 'Dwarf.'

This collection, which I had the opportunity of working out, comprised 207 skins, representing 118 species and subspecies, including 32 birds new to the colony, and forms the basis of Mr. Lowe's paper published in the current number of 'The Ibis' (*cf.* pp. 265-282).

Commander Dane has generously presented the birds obtained to the Natural History Museum, where they form a most valuable addition to our West African collections.

In the following pages I have attempted to bring up to date the list of birds known to have occurred in the Sierra Leone Protectorate, somewhat on the lines of Professor Neumann's List of Birds of the Lower Senegal Region (*cf.* Journ. Ornith. LXV. vol. ii. 1917, pp. 189-213.)

The specific or subspecific name of the race to which the form is now supposed to belong is given in full, together with the author of the name used. Following this are the names of the collectors who have actually obtained the birds against which the names are placed.

With the exception of Afzelius, Kemp, Kelsall, and W. P. Lowe, the other collectors mentioned have only obtained a few odd birds, which have either been noticed casually (as, for instance, those of Dr. Fergusson) in such works as 'The Catalogue of the Birds in the Collection of Sir William Jardine,' or by Cassin or Fraser, who, in the various publications to which they contributed (*vide* List of Literature), usually mentioned the source from which their Sierra Leone birds had been obtained, and thus gave a clue to the actual collector of the birds described by them. Other collectors' names, again, have simply been copied from labels of Sierra Leone birds in the British Museum Collection.

Lowe i. following a bird's name in the List signifies that

that particular species was obtained by Mr. Willoughby Lowe during his first visit to the Colony in 1911, while Lowe ii. signifies that the bird was obtained by him during his recent visit in 1920.

Anyone checking this List must remember that nomenclature is in what may be termed a transition stage at the present time, and in consequence many of the names used by Kemp in 1905 and by myself in 1912 have been rejected in favour of one we now know to be more correct. All old references are included, but often under a different name.

The specific nomenclature has been carefully revised and brought up to date, but individual judgment in accepting new names or discussing old ones has, in certain cases, been exercised by the writer.

SYSTEMATIC LIST

of the Birds of Sierra Leone, with names of Collectors.

Family CORVIDÆ [Crows].

Corvus scapulatus Daud. (Kemp, Kelsall, Lowe ii.)

Picathartes gymnocephalus (Temm.). (Kelsall.)

? *Cryptorhina atra* (Linn.). (Fergusson *.)

Family DICRURIDÆ [Drongos].

Dicrurus assimilis atactus Oberholser. (Kemp, Kelsall, Lowe ii.)

Dicrurus atripennis Swains. (Fergusson, Kelsall.)

Dicrurus assimilis ? *divaricatus* (Licht.). (Fergusson.)

Family ORIOLIDÆ [Orioles].

Oriolus nigripennis Verr. (Kemp, Kelsall.)

Oriolus auratus Vieill. (Kelsall.)

Oriolus larvatus rolleti Salvad. (Kelsall.)

* In this List, birds collected by Fergusson in Sierra Leone were named by Sir William Jardine, and duly recorded by him in his Catalogue of the Jardine Collection (1874).

Family STURNIDÆ [Starlings].

- ? *Buphaga africana* Linn. (Fergusson.)
Cinnyricinclus leucogaster leucogaster (Gmel.). (Kemp,
 Kelsall, Lowe i, ii.)
Onychognathus hartlaubi Gray. (Kemp.)
Lamprocolius cupreicauda Hartl. (Kemp.)
Lamprocolius splendidus (Vieill.). (Kelsall.)
 ? *Lamprotornis caudatus* (Müll.). (Fergusson.)

Family PLOCEIDÆ [Weavers].

- ? *Steganura** *paradisea* (Linn.). (Fergusson.)
Vidua serena (Linn.). (Kemp, Kelsall.)
Coliuspasser concolor (Cass.). (Afzelius, Kelsall.)
Penthetriopsis macrura (Gmel.). (Kemp, Kelsall, Lowe ii.)
Pyromelana hordeacea † *hordeacea* (Linn.). (Kemp, Kelsall,
 Lowe ii.)
Pyromelana afro (Gmel.). (Kemp, Kelsall.)
Pyrenestes ostrinus coccineus Cass. (Kemp, Kelsall,
 Lowe i, ii.)
Quelea erythrops (Hartl.). (Kemp, Kelsall.)
Spermestes bicolor (Fraser). (Kemp, Kelsall, Lowe i, ii.)
Spermestes cucullatus Swains. (Afzelius, Kemp, Kelsall,
 Lowe i, ii.)
Amauresthes fringilloides (Lafr.). (Kemp.)
Ortygospiza atricollis unsorgei Grant. (Lowe ii.)
Lagonosticta senegala (Linn.). (Kemp, Kelsall.)
Lagonosticta polionota Shelley. (Kemp, Kelsall, Lowe ii.)
Lagonosticta brunneiceps Sharpe. (Lowe i.)

* It is doubtful to which form the Paradise Weaver, said to have been obtained by Fergusson in Sierra Leone, would belong. The North African race is *S. p. verreauxi* (Cassin), while the birds from the Gambia and Senegal have been named *S. p. aucupum* by Neumann.

† *Pyromelana flammeiceps* (Swains.) et auct. (cf. Ibis, 1920, p. 849).

- Hypargos schlegeli* (Sharpe). (Sabine, Kemp, Kelsall.)
Nigrita bicolor (Hartl.). (Kemp, Kelsall.)
Nigrita emiliae Sharpe. (Kemp, Kelsall, Lowe i, ii.)
Estrilda melpoda (Vieill.). (Kemp, Kelsall.)
Estrilda subflava (Vieill.). (Kemp.)
Estrilda astrild occidentalis Fraser. (Kemp, Kelsall.)
Sitagra ocellarius brachypterus (Swains.). (Fergusson,
 ? Forbes, Kemp, Kelsall, Lowe i, ii.)
Hyphantornis cucullatus (Müll.). (Afzelius, Kemp, Kelsall,
 Lowe i, ii.)
Pachyphantes scutatus superciliosus (Shelley). (Kelsall,
 Lowe ii.)
Melanopteryx castaneofuscus (Less.). (Kemp, Kelsall,
 Lowe i, ii.)
Melanopteryx fuscocastaneus (Boc.). (Sabine, Kemp,
 Kelsall.)
Melanopteryx albirostris (Boc.). (Kemp.)
Malimbus malimbicus melanobrephos Hartert. (Kemp,
 Kelsall.)
Malimbus rubricollis bartletti Sharpe. (Kemp.)
Malimbus nitens (Gray). (Afzelius, Sabine, Kelsall.)
Malimbus scutatus scutatus (Cassin). (Brit. Mus. ex Tweed-
 dale Coll.)
Spernospiza haematina leonina Neum. (Kemp, Kelsall,
 Lowe ii.)

Family FRINGILLIDÆ [Finches].

- Serinus hartlaubi* (Bolle). (Kelsall.)
Anomalospiza imberbis (Cab.). (Kemp.)

Family MOTACILLIDÆ [Wagtails and Pipits].

- Budytes flava flava* (Linn.). (Kemp, Kelsall, Lowe ii.)
Motacilla vidua Sund. (Kelsall.)
 ? *Anthus campestris* (Linn.). (Fergusson).

- Anthus leucophrys gouldii* Fraser. (Kemp, Kelsall, Lowe i, ii.)
Anthus trivialis trivialis (Linn.). (Kemp.)
Macronyx croceus croceus (Vieill.). (Kemp, Kelsall,
 Lowe i, ii.)

Family NECTARINIDÆ [Sunbirds].

- Cinnyris cupreus* (Shaw). (Kemp, Kelsall, Lowe ii.)
Cinnyris johannæ Verr. (Kemp.)
Cinnyris splendidus (Shaw). (Fergusson, Kelsall, Lowe i.)
Cinnyris venustus venustus (Shaw). (Kelsall, Lowe ii.)
Cinnyris chloropygius chloropygius (Jard.). (Kemp, Kelsall,
 Lowe i, ii.)
Chalcomitra senegalensis senegalensis (Linn.). (Fergusson.)
Cyanomitra obscura obscura (Jard.). (Kemp, Kelsall, Lowe ii.)
Cyanomitra verticalis verticalis (Lath.). (Fergusson, Kemp,
 Kelsall, Lowe i, ii.)
Anthothreptes collaris hypodila (Jard.). (Kemp, Kelsall,
 Lowe i.)
Anthothreptes gabonica (Hartl.). (Kelsall, Lowe ii.)
Anthothreptes ilia Oberh. (Kelsall.)

Family ZOSTEROPIDÆ [White-eyes].

- Zosterops senegalensis senegalensis* Bonap. (Kemp, Kelsall,
 Lowe i, ii.)

Family PARIDÆ [Titmice].

- Melaniparus niger guineensis* Shelley. (Kelsall.)
Pholidornis rushie ussheri Hartert. (Kelsall.)

Family LANIIDÆ [Shrikes].

- Fiscus collaris smithi* (Fraser). (Kemp, Kelsall, Lowe ii.)
Lanius senator senator Linn. (Fergusson.)
Laniarius leucorhynchus (Hartl.). (Kemp, Kelsall.)

- Laniarius turatii* (Verr.). (Kelsall, Lowe ii.)
Laniarius barbarus helenæ Kelsall. (Kelsall.)
Laniarius barbarus barbarus (Linn.). (Fergusson *, Clark †.)
Dryoscopus gambensis gambensis (Licht.). (Afzelius, Fraser, Kelsall, Lowe i, ii.)
Channonotus sabini sabini (Gray). (Sabine, McDowell, Kemp, Kelsall.)
Tschagra senegala senegala (Linn.). (Kemp, Kelsall, Lowe i, ii.)
Tschagra australis ussheri (Sharpe). (Kemp, Kelsall.)
Antichromus minutus minutus (Hartl.). (Lowe ii.)
 ? *Malaconotus olivaceus olivaceus* (Vieill.). (Forbes.)
Malaconotus cruentus (Less.). (Kemp.)
Chlorophoneus multicolor (Gray). (Kemp, Kelsall.)
Chlorophoneus sulfureopectus sulfureopectus (Less.).
 (? Fergusson, Kelsall, Lowe ii.)
Nicator chloris chloris (Less.). (Kemp, Kelsall.)
Sigmodus caniceps caniceps Bonap. (Kemp.)
Corvinella corvina corvina (Shaw). (Fergusson.)

Family PRIONOPIDÆ [Wood-Shrikes].

- Fraseria prospora* Oberh. (Kelsall.)

Family SYLVIIDÆ [Warblers].

- Melocichla mentalis mentalis* (Fraser). (Kemp, Kelsall, Lowe ii.)
Cisticola rufopileata rufopileata Rehw. (Lowe ii.)
Cisticola erythrops erythrops (Hartl.). (Kemp, Kelsall, Lowe ii.)
Cisticola brachyptera (Sharpe). (Lowe i, ii, Kelsall, Scovil.)
Cisticola lateralis (Fraser). (Kelsall, Lowe ii, Scovil.)
Cisticola cisticola wropygiulis (Fraser). (Kelsall.)

* Recorded by Jardine in his Catalogue.

† Recorded by Reichenow, Vög. Afr. ii. p. 588.

- Cisticola terrestris*, subsp. ? (Lowe ii, Scovil.)
Cisticola natalensis strangei (Fraser). (Kelsall.)
Cisticola semitorques swauzii (Sharpe). (Kelsall.)
Sylvia simplex Lath. (Kemp, Kelsall, Lowe i, ii.)
Phylloscopus trochilus trochilus (Linn.). (Kemp, Kelsall.)
Sylviella flaviventris flaviventris (Sharpe). (Kelsall.)
Sylviella hardyi Bannerm. (Kelsall, Lowe i.)
 ? *Eremomela badiceps* (Fraser). (*Ex* Jardine Coll.)
Eremomela pusilla Hartl. (Kelsall, Lowe ii.)
Prinia mystacea melanorhynchu (Jard.). (Kemp, ? Kelsall,
 Lowe ii.)
Hylia prasina Cass. (Kemp, Kelsall, Lowe ii.)
Stiphronis erythrothorax Hartl. (*Ex* Jardine Coll., Kelsall.)
Cumaropectera griseiviridis tinctoria Cass. (Kemp, Kelsall,
 Lowe ii.)
Cumaropectera chloronota Rehw. (Kelsall.)
Cumaropectera superciliaris (Fraser). (Kelsall.)

Family TURDIDÆ [Thrushes].

- Turdus libonianus lugubris* Bodd. (Kelsall, Kemp,
 Lowe i, ii.)
Luscinia megarhynchos megarhynchos Brehm. (Kelsall.)
 * *Bessonornis verticalis verticalis* Hartl. (Kelsall, Lowe i.)
 * *Bessonornis cyanocampter cyanocampter* (Bonap.).
 (Kelsall.)
 * *Bessonornis albicapilla albicapilla* (Vieill.). (Afzelius,
 ? Fergusson.)
Alethe diademata (Bonap.). (Kemp.)
Alethe poliocephala castanonota Sharpe. (Kelsall.)
Pentholœa frontalis (Swains.). (Lowe ii.)
Saxicola rubetra rubetra (Linn.). (Fergusson, Kemp,
 Kelsall, Lowe i, ii.)
Ænanthe ænanthe leucorrhœa (Gmel.). (Kemp, Lowe i.)

* *Cossypha* auct. (*cf.* Ibis, 1920, p. 851).

Family TIMELIIDÆ [Babblers].

- Hypergerus atriceps* (Less.). (Kelsall.)
 * *Turdoides platycircus* Swains. (Kelsall.)
 * *Turdoides atripennis atripennis* (Swains.). (Afzelius.)
Macrosphenus concolor (Hartl.). (Kemp.)
Macrosphenus kemp (Sharpe). (Kemp, Kelsall.)
Macrosphenus zenkeri Reihw. (Kelsall.)
Turdinus hypoleucus Sharpe. (Kelsall.)
Turdinus gularis (Sharpe). (Kelsall.)
Turdinus fulvescens (Cass.). (Kemp.)

Family PYCNONOTIDÆ [Bulbuls].

- Pycnonotus barbatus inornatus* Hartl. (Kemp, Kelsall,
 Lowe ii.)
Criniger barbatus (Temm.). (Kelsall.)
Criniger verreauxi verreauxi Sharpe. (Kelsall.)
Bleda canicapilla (Hartl.). (Kemp, Kelsall.)
Bleda syndactyla (Swains.). (Kelsall.)
Phyllastrephus simplex (Hartl.). (Kemp, Kelsall, Lowe i, ii.)
Phyllastrephus icterinus (Bonap.). (Kelsall.)
Andropadus gracilis Cab. (Kelsall, Lowe i.)
Andropadus latirostris congeuer Rehw. (Kelsall.)
Andropadus serinus (Verr.). (Kelsall.)
Andropadus indicator leucurus (Cass.). (MacDowell,
 Kelsall, Lowe ii.)
Andropadus virens virens Cass. (Kemp, Kelsall, Lowe i, ii.)
Andropadus curvirostris curvirostris Cass. (Kemp.)
Andropadus gracilirostris Strickl. (Kemp, Lowe ii.)

Family CAMPOPHAGIDÆ [Cuckoo-Shrikes].

- Cyanograucalus azureus* (Cass.). (MacDowell, Kelsall.)
Graucalus pectoralis (Jardine & Selby). (Brit. Mus.
 ex Jardine Coll., type.)

* *Crateropus* auct. (cf. Ibis, 1820, p. 851).

- Campophaga phœnicea* (Lath.). (Kemp, Kelsall, Lowe ii.)
Campophaga quiscalina Finsch. (? *E.r* Jardine Coll., Kelsall.)

Family MUSCICAPIDÆ [Flycatchers].

- Brudyornis murinus modestus* Shelley. (Lowe ii.)
Batis senegalensis togoensis Neumann. (Lowe ii.)
Diaphorophya blissetti Sharpe. (Kemp, Kelsall.)
Diaphorophya castanea (Fraser). (Kemp.)
Diaphorophya hormophora Rehw. (Kelsall.)
Bias musicus (Vieill.). (Kemp, Kelsall, Lowe i, ii.)
Platysteira cyanea cyanea Müll. (Kemp, Kelsall, Lowe i, ii.)
Artomyius ussheri Sharpe. (Kelsall.)
Hyltiota flavigustra flavigustra (Swains.). (Fergusson,
 Kelsall.)
Trochocercus nitens reichenowi Sharpe. (Kemp.)
Tchitrea nigriceps (Hartl.). (Marche & Compiègne, Kemp,
 Kelsall, Lowe ii.)
Tchitrea viridis viridis (Müll.). (Fergusson, Lowe ii.)
Elminia longicauda (Swains.). (Kelsall, Lowe i.)
Stizorhina fuschii (Sharpe). (Kelsall.)

Family HIRUNDINIDÆ [Swallows].

- Hirundo rustica rustica* Linn. (Kelsall, Lowe ii.)
Hirundo semirufa gordonii Jard. (Kelsall, Lowe ii.)
Psalidoprocne obscura (Hartl.). (Kelsall, Lowe i, ii.)
Riparia riparia riparia (Linn.). (Lowe ii.)

Family PITTIDÆ [Ant-Thrushes].

- Pitta pulih* Fraser. (Fraser, Kemp.)

Family PICIDÆ [Woodpeckers].

- Mesopicus pyrrhogaster* (Mall.). (Afzelius [according to
 Malherbe], Kemp, Kelsall.)
Mesopicus goertæ poicephalus (Swains.). (Kelsall, Lowe i.)

Dendromus nivosus nivosus Swains. (Kemp, Kelsall, Lowe ii.)

Dendromus maculosus (Val.). (Kemp, Kelsall, Lowe i, ii.)

Dendromus caroli arizelus Oberh. (Kelsall.)

Dendropicus lufresnayi zechi Neum. (Kelsall, Lowe i, ii.)

Dendropicus lugubris Hartl. (Kemp, Kelsall, Lowe ii.)

Family INDICATORIDÆ [Honey-Guides].

Indicator, species uncertain. (Kelsall.)

Indicator exilis leona (C. Grant). (Lowe i.)

Family CAPITONIDÆ [Barbets].

Lybius bidentatus bidentatus (Shaw). (Kelsall, Lowe i, ii.)

Lybius vieilloti rubescens (Temm.). (Kelsall, Lowe ii.)

Gymnobucco calvus (Lafr.). (Kelsall.)

Pogoniulus erythronota (Cuv.). (Kelsall, Lowe ii.)

Pogoniulus chrysopyga Shelley. (Kelsall.)

Pogoniulus scolopaceus scolopaceus (Bonap.). (Kemp, Kelsall,
Lowe i, ii.)

Trachylemus goffiui (Sehl.). (Kemp, Kelsall.)

Family MUSOPHAGIDÆ [Plantain-eaters].

Turacus macrorhynchus (Fraser). (Afzelius, Kemp, Kelsall.)

Turacus buffoni Vieill. (Afzelius, Kemp, Kelsall, Lowe ii.)

Musophaga violacea Isert. (Fergusson for Jardine.)

Corythæola cristata (Vieill.). (Afzelius, *ex* Jardine Coll.,
Kemp, Kelsall.)

* *Crinifer africana africana* (Lath.). (Kemp, Kelsall, Lowe ii.)

Family CUCULIDÆ [Cuckoos].

Clamator glandarius (Linn.). (Lowe ii.)

Clamator cafer (Licht.). (Fraser, Clark, Kemp, Kelsall.)

Cuculus clamosus Lath. (Kemp, Kelsall.)

* *Chizærhis* auct.

- Chrysococcyx cupreus cupreus* (Shaw). (Chamley, Kelsall.)
 [= *C. smaragdineus*, auct.].
- Chrysococcyx caprius* (Bodd.). (Kemp, Kelsall, Lowe ii.)
 [= *C. cupreus* Bodd. et auct.].
- Chrysococcyx kluasi* (Steph.). (Kelsall, Lowe ii.)
- Centropus senegalensis senegalensis* (Linn.). (Afzelius, Kemp,
 Kelsall, Lowe i, ii.)
- Centropus francisii* Bonap. (Lowe ii.)
- Ceuthnochaeres aereus flavirostris* (Swains.). (Afzelius, Sabine,
 Clark, Kemp, Kelsall, Lowe i, ii.)

Family CYPSELIDÆ [Swifts].

- Chætura sabinei* Gray. (Sabine, Kelsall.)
- Tachornis parvus brachypterus* Rehw. (Kelsall, Lowe i, ii.)
- Micropus affinis* (Hardw.). (Kelsall, Lowe ii.)
- * *Micropus æquatorialis lowei* (Bannerman). (Lowe ii.)

Family CAPRIMULGIDÆ [Nightjars].

- Scotornis climacurus* (Vieill.). (Kemp, Kelsall, Lowe ii.)
- † *Macrodipteryx longipennis* (Shaw). (Afzelius, Sabine,
 Kemp, Kelsall.)

Family BUCEROTIDÆ [Hornbills].

- Lophoceros semifasciatus* (Hartl.). (Kemp, Kelsall, Lowe ii.)
- Lophoceros nasutus nasutus* (Linn.). (Lowe ii.)
- Bycanistes cylindricus* (Temm.). (Kelsall.)
- Bycanistes fistulator* (Cass.). (Lowe ii.)
- Ceratogymna elata* (Temm.). (Afzelius, Kemp.)
- Bucorvus* sp.? (Lowe ii.)

* For remarks on this new Swift, see note by myself following introduction to Mr. Lowe's paper (*ante*, p. 266).

† Major Claude Grant has conclusively shown ('Ibis,' 1915, p. 302) that Afzelius's name *macrodipterus* for this Nightjar cannot stand.

Family MEROPIDÆ [Bee-eaters].

Melittophagus gularis gularis (Shaw & Nodd). (Afzelius, Kemp, Kelsall.)

Melittophagus pusillus pusillus (Müll.). (Kemp, Kelsall.)

Aerops albicollis albicollis (Vieill.). (Jardine, Marche & Compiègne, Stephens, Bartlett, Kemp, Kelsall, Lowe i, ii.)

Merops persicus chrysocercus Cabanis. (Kelsall, Lowe ii.)

Merops nubicus nubicus Gmel. (Kelsall.)

Merops mentalis mentalis Cabanis. (Kelsall.)

Family UPUPIDÆ [Hoopoes and Wood-Hoopoes].

**Phœniculus erythrorhynchus senegalensis* (Vieill.).
(Fergusson).

Family CORACIDÆ [Rollers].

Coracias abyssinus senegalensis Gmel. (Fergusson, Kemp, Kelsall.)

Coracias cyanoaster Cuv. (Kelsall.)

Eurystomus afer afer (Lath.). (Bartlett, Kemp, Kelsall, Lowe † ii.)

Eurystomus gularis Vieill. (*Ex* Jardine Coll., Kemp, Kelsall.)

Family ALCEDINIDÆ [Kingfishers].

Ceryle maxima gigantea (Swains.). (Lowe i.)

Ceryle rudis rudis (Linn.). (Afzelius, Fergusson, Kelsall, Lowe i, ii.)

Halcyon chelicuti (Stanl.). (Fergusson.)

Halcyon leucocephala leucocephala (Müll.). (Kemp, Kelsall.)

Halcyon senegalensis senegalensis (Linn.). (Kemp, Kelsall.)

* *Irrisor* auct.

† Seen only by this collector.

Halcyon malimbicus forbesi Sharpe. (Afzelius, Marche & Compiègne, Kemp, Kelsall, Lowe i, ii.)

Alcedo quadibrachys quadibrachys Bonap. (Kemp, Kelsall, Lowe i.)

Corythornis cristata (Vroeg). (Kemp, Kelsall, Lowe i.)

Ispidina picta picta (Bodd.). (Kemp, Lowe ii.)

Ispidina leucogaster (Fraser). (Kelsall.)

Family PSITTACIDÆ [Parrots].

Psittacus erithacus timneh Fraser. (Kelsall, Lowe ii.)

**Agapornis pullarius pullarius* (Linn.). (Kelsall, Lowe ii.)

Family STRIGIDÆ [Owls].

Bubo leucostictus Hartl. (Kemp.)

Bubo poensis Fraser. (Kemp.)

Bubo africanus cinerascens Guér. (Lowe ii.)

Otus leucotis leucotis (Temm.). (Fergusson, Kemp, Kelsall.)

†*Tyto alba alba* (Scop.). (Kemp.)

Syrnium nuchale Sharpe. (Kemp, Lowe ii.)

Family FALCONIDÆ [Hawks].

Gymnogenys typicus (Smith). (Kemp, Kelsall, Lowe i.)

Astur badius sphenurus (Rüpp.). (Kemp, Lowe ii.)

Astur tachiro macroscelides (Temm.). (Kemp.)

Accipiter hartlaubi hartlaubi (Verr.). (Kemp.)

Buteo auguralis Salvad. (Kelsall, Lowe i, ii.)

* The type-locality of this species is Nubia. West African examples may eventually require separating.

† This bird is not *T. a. maculata* (Brehm) as Kemp recorded it, or, as it should now be called, *T. a. affinis*, the ordinary African Barn-Owl. It is almost pure white on the underside, and hardly spotted at all. The upper-parts are very grey and much paler than in African specimens. As Selater and Præd remark, it is nearer typical *T. alba alba*.

- * *Aquila wahlbergi* Sundev. (Lowe ii.)
 * *Spizaëtus coronatus* (Linn.). (Lowe ii.)
Kaupifalco monogrammicus monogrammicus (Temm.).
 (Fergusson, Kemp, Kelsall, Lowe ii.)
 * *Cuncuma vocifer* (Daud.). (Lowe ii.)
Circaëtus cinereus Vieill. (Lowe ii.)
Milvus migrans parasitus Daud. (Kemp, Kelsall, Lowe ii.)
Elanus cæruleus cæruleus (Desf.). (Kemp, Kelsall.)
Aviceda cuculoides cuculoides (Swains.). (Kemp.)
 * *Pandion haliaëtus haliaëtus* (Linn.). (Lowe ii.)
Gypohierax angolensis (Gmel.). (Kemp, Kelsall, Lowe † ii.)

Family VULTURIDÆ [Vultures].

- Necrosyrtes monachus monachus* (Linn.). (Lowe ii.)

Family PELECANIDÆ [Pelicans].

- Pelecanus*, species uncertain. (Lowe † ii.)

Family PHALACROCORACIDÆ [Cormorants].

- Phalacrocorax africanus* (Gmel.). (Kemp, Kelsall, Lowe ii.)
Anhinga rufu (Lacép., Daud.). (Kemp, Kelsall, Lowe ii.)

Family ANATIDÆ [Ducks].

- Dendrocygna viduata* (Linn.). (Kemp, Kelsall.)
Pteronetta cyanoptera (Temm.). (Kelsall.)

Family IBIDIDÆ [Ibises].

- Plegadis autumnalis* (Hasselq.). (Kemp.)
 [*falcinellus*, auct.]

* These species were seen only, not obtained.

† Seen only by Mr. Lowe and not obtained.

‡ Mr. Lowe believed the Pelican he saw off Tasso Island to be *P. onocrotalus sharpei*; he did not succeed in procuring a specimen.

Family CICONIIDÆ [Storks].

Dissoura episcopus microscelis (Gray). (Kelsall.)

Family SCOPIDÆ [Hammer-heads].

Scopus umbretta umbretta Gmel. (Kelsall.)

Family ARDEIDÆ [Herons].

* *Ardea goliath* Cretschm. (Lowe ii.)

Ardea cinerea Linn. (Kemp, Lowe.)

Demigretta gularis gularis (Bosc). (Lowe i, ii.)

Melanophoyx ardesiaca (Wagl.). (Lowe ii.)

Nycticorax nycticorax nycticorax (Linn.). (Kelsall, Lowe ii.)

Butorides atricapilla (Afzel.). (Kemp, Kelsall, Lowe i, ii.)

Tigrornis leucolopha (Jardine). (Kemp.)

Ardeola ibis ibis (Linn.). (Lowe ii.)

Ardeirallus sturmi (Wagl.). (Kelsall.)

Family HELIORNITHIDÆ [Fin-feet].

Podica senegalensis senegalensis (Vieill.). (Kelsall.)

Family CHARADRIIDÆ [Waders].

Gallinago gallinago gallinago (Linn.). (Kemp.)

Tringa ferruginea ferruginea Brünnich. (Lowe ii.)

Calidris arenaria (Linn.). (Kelsall.)

Totanus totanus (Linn.). (Lowe ii.)

Totanus nebularius (Gunn.). (Kelsall, Lowe i.)

Totanus hypoleucus (Linn.). (Kemp, Kelsall, Lowe i.)

Rhyacophilus glareola (Linn.). (Lowe ii.)

Numenius arquatus arquatus (Linn.). (Kelsall, Lowe * ii.)

Numenius phaeopus phaeopus (Linn.). (Kelsall, Lowe ii.)

Himantopus himantopus (Linn.). (Kelsall.)

• * Seen only by this collector.

**Squatarola squatarola* (Lowe ii.)

Stephanibyx lugubris (Lesson †). (Kelsall.)

[= *S. inornatus*, auct.]

Oxyechus forbesi (Shelley). (Kelsall.)

Charadrius hiaticula hiaticula (Linn.). (Kelsall.)

Pluvianus aegyptius (Linn.). (Kelsall.)

Arenaria interpres interpres (Linn.). (Kelsall, Lowe ii.)

Family LARIDÆ [Gulls and Terns].

Larus fuscus fuscus (Linn.). (Lowe ii.)

Larus fuscus affinis (Reinh.). (Lowe i.)

Larus cirrhocephalus Vieill. (Lowe i, ii.)

Sterna maxima Bodd. (Kelsall, Lowe i, ii.)

Sterna sandvicensis sandvicensis Lath. (Kelsall, Lowe i.)

Sterna, sp. [? *dougalli* Mont.]. (Lowe ii.)

Hydrochelidon nigra (Linn.). (Lowe ii.)

Hydrochelidon hybrida (Pall.). (Lowe ii.)

Family RALLIDÆ [Rails].

Sarothrura bohmi danei Bannerm. (Kemp.)

Porphyrio alleni Thoms. (Kelsall.)

Family COLUMBIDÆ [Pigeons].

Streptopelia semitorquatu erythrophrys (Swains.). (Kemp, Kelsall, Lowe * ii.)

Turturæna iriditorques (Cass.). (Kemp, Kelsall, Lowe ii.)

Calopelia puella (Schl.). (Ex Jardine Coll., Kemp, Kelsall.)

Turtur afra afra (Linn.). (Kemp, Kelsall, Lowe ii.)

Tympanistria tympanistria (Temm.). (Kemp, Kelsall, Lowe i.)

Vinago calva calva (Temm.). (Kemp, Kelsall, Lowe * ii.)

* Seen only, not obtained.

† *lugubris* Lesson has priority over *inornatus* Swains. (cf. C. Grant, 'Ibis,' 1915, p. 56).

Family TURNICIDÆ [Hemipodes].

Turnix nana (Sund.). (Kelsall.)

Family PHASIANIDÆ [Game-Birds].

Francolinus bicalcaratus thornei Grant. (Thorne, Parks, Kemp, Kelsall, Lowe i, ii.)*Francolinus lathamii lathamii* Hartl. (Kemp.)*Francolinus ahantensis* Temm. (Kemp, Kelsall.)? *Ptilopachus fuscus fuscus* Vieill. (P. Niel *ex* Jardine Coll.)* *Coturnix coturnix*. (Kelsall.)*Excalfactoria adansoni* (Verr.). (Kelsall.)*Guttera cristata* (Pall.). (Afzelius, Manger.)*Numida meleagris* Linn. (Lowe ii.)XVI.—*J. F. Miller's Icones.*

By C. DAVIES SHERBORN and TOM IREDALE.

MILLER'S *Icones Animalium*: [Various Subjects of Natural History] 1776-1785, may be regarded as a rare book. Dryander, *Cat. Bibl. Banks*, states "10 pp., 60 pls.;" Pritzel copies him; Watts gives no details, but wrote "London, 1785: Large folio. £6. 6. 0." Lowndes says "1785. 176 pp., 12 pls. and 2 leaves of text"; Engelmann contents himself with "In Nos. 1785." Eliminating Lowndes' entry which is obviously incorrect, the conclusion can be reached that the book was issued in 10 parts and contained 60 plates, which is the extent of the '*Cimelia Physica*,' a well-known work. The '*Cimelia Physica*' was issued in 1796, and consists of 60 plates by Miller with 106 pages of explanatory text written by George Shaw.

When Sherborn completed the '*Index Animalium*' 1758-1800, the only known (to him) copy was in the British Museum from Sir Joseph Banks's library, and this contained

* Named binominally and no author given, as it is not clear which Quail is intended.